

WHAT IS CLAIMED IS:

- 1        1.        A liquid ejection head, comprising:
  - 2                a plurality of liquid ejection units, each comprising:
    - 3                        a casing body, having a first pair of faces extending in a first
    - 4                        direction, and a second pair of faces connecting the first pair of faces and
    - 5                        extending obliquely relative to the first direction; and
    - 6                        a plurality of nozzles, from which liquid droplets are ejected, the
    - 7                        nozzles arranged in the first direction to form a first nozzle array and a second
    - 8                        nozzle array, wherein:
      - 9                                the liquid ejection units are arranged such that one of the second pair
      - 10                                of faces in one of the liquid ejection units and one of the second pair of faces
      - 11                                in another one of the liquid ejection units are confronted with each other, so
      - 12                                that the liquid ejection units are overlapped in both of the first direction and a
      - 13                                second direction which is perpendicular to the first direction;
      - 14                                the first nozzle array in one of the liquid ejection units and the first
      - 15                                nozzle array in another one of the liquid ejection units constitute a first nozzle
      - 16                                group, which is continuous as viewed from the second direction, for ejecting a
      - 17                                first kind of liquid; and
      - 18                                the second nozzle array in one of the liquid ejection units and the
      - 19                                second nozzle array in another one of the liquid ejection units constitute a
      - 20                                second nozzle group, which is continuous as viewed from the second direction,
      - 21                                for ejecting a second kind of liquid.

1        2.        The liquid ejection head as set forth in claim 1, wherein:  
2                the casing body is formed with a chamber for accommodating a  
3        plurality of vibrator units which extends in a third direction which is orthogonal  
4        to the first direction and the second direction;  
5                each of the vibrator units comprises:  
6                a fixation board, fixed on an inner face of the chamber; and  
7                a plurality of piezoelectric vibrators, arranged on the fixation board  
8        in the first direction to cause pressure fluctuation in liquid contained in pressure  
9        generation chambers which are respectively communicated with the nozzles in  
10       one of the first nozzle array and the second nozzle array; and  
11               the second pair of faces extend in the third direction.

1        3.        The liquid ejection head as set forth in claim 2, wherein the second  
2        pair of faces are parallel to each other as viewed from the third direction.

1        4.        The liquid ejection head as set forth in claim 2, wherein a dimension  
2        of the fixation board in the first direction is greater than a length of each of the  
3        first nozzle array and the second nozzle array.

1        5.        The liquid ejection head as set forth in claim 1, wherein lengths of the  
2        first nozzle array and the second nozzle are identical with each other.

1        6.        The liquid ejection head as set forth in claim 1, wherein the first kind  
2        of liquid and the second kind of liquid are identical with each other.

1        7.        The liquid ejection head as set forth in claim 1, wherein the first kind  
2        of liquid and the second kind of liquid are different from each other.

1        8.        The liquid ejection head as set forth in claim 1, wherein:  
2                each of the liquid ejection units comprises a first liquid reservoir  
3        communicated with the nozzles in the first nozzle array, and a second liquid  
4        reservoir communicated with the nozzles in the second nozzle array; and  
5                the first nozzle array and the second nozzle array are arranged  
6        between the first liquid reservoir and the second liquid reservoir, as viewed  
7        from a third direction which is orthogonal to the first direction and the second  
8        direction.

1        9.        The liquid ejection head as set forth in claim 1, wherein:  
2                the nozzles are arranged with a constant interval; and  
3                the first nozzle array and the second nozzle array are shifted relative  
4        to each other in the first direction by a half of the constant interval.

1        10.       The liquid ejection head as set forth in claim 1, further comprising a  
2        holder, formed with a positioning member which determines positions of the  
3        liquid ejection units.